Minh Thang Cao

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Experience

Software Engineer Intern **Pattern** **May 2022 – Aug 2022**

- Developing server endpoints, data modules and AWS Lambda with Node.js + TypeScript integrated with Terraform which helps automate workforce recruitment and management processes (currently manual) by **90%**.
- Applying new design to the Flutter mobile app by creating an internal UI library with reusable widgets.

Software Engineer Intern **Kinaxis** **Sep 2021 – Dec 2021**

- Developed an interactive data visualization with D3.js library integrated with TypeScript + HTML environment which enhanced the ability to analyze supply chain allotment data and debug issues, assisted onboard Kinaxis's new developers by providing supply arrangement algorithm's insights.

Software Engineer Intern **Kinaxis** **May 2021 – Aug 2021**

- Investigated and implemented in C++ a product cycle detection graph algorithm that combines variances of strongly connected components and cycles enumeration algorithms to enhanced supply planning outputs for over 200 global enterprises.
- Improved the running time of the platform in cycles detection from more than 12 hours to 1 second on a customer data set, produced high-quality and more detailed cycle data compared to the previous version.

Volunteer Front-end Developer **CU Blueprint** **Sep 2020 – Aug 2021**

Beneficent CRM

- Developed a CRM full-stack web application for a non-profit organization that significantly improves the processing time of their services by migrating to software-automatic workflow.
- Collaborated with developers and designers in an Agile team, building a user-friendly and responsive user interface with reusable components using React + TypesScript and CSS that integrates with Node.js server.

Undergraduate Research **Carleton University** **May 2020 – Aug 2020**

Closest-pair Doubling

- Explored a divide-and-conquer algorithm that calculates the closest-pair distance of points on multi-dimensional spaces without knowing coordinates using the doubling dimension definition.
- Implemented from scratch with C++, analyzed and proved the algorithm's logarithmic running time in practice by analyzing the output data and successfully led the original research project to a conclusion.

Teaching Assistant **Carleton University** **Sep 2020 – Apr 2022**

- Participated in engaging tutorial sections to help professors guide more than 2000 students through materials of Computer Science courses, graded and provided detailed feedback for students' assignments and tests.
- Holding weekly office hours to answer questions and help students improve their understanding of the materials.

Projects

Gonline *Python, Flask, JavaScript, HTML, CSS, Jinja2, Socket.IO, SQLAlchemy, PostgreSQL*

- Built an online real-time Go game using Flask with Jinja2 template integrated with Socket.IO.
- Designed the SQL data models with SQLAlchemy and stored data in a PostgreSQL database.

Connect 4 *JavaScript, React, HTML, CSS, Node.js, Express.js, Socket.IO, MongoDB*

- Developed a full-stack web game using the MERN stack technologies with React responsive user interface and Node.js RESTful API endpoints that process queries efficiently.

Education

Carleton University ***Ottawa, Ontario, Canada***

Bachelor of Computer Science Sep 2019 – May 2024 (Expected)

CGPA: 11.64/12 (**A+**). On **Dean's Honour List** since 2019.

Skills

Languages: Python, JavaScript, TypeScript, C/C++, Java, Kotlin, HTML, SQL
Technologies: React, Node.js, React Native, Express.js, Flask, Flutter, CSS, Git, AWS, Linux